

REMARKS/ARGUMENTS

Support for the Amendments

The amendment to Claims 1, 2 and 6 to add the limitation that only two dienophile groups can be attached to the single aromatic ring is supported throughout the specification, for example, on page 2 in the second full paragraph. Claim 3 is amended to add a missing period. Claim 7 was amended to claim only from claim 1.

The 112 Rejections

The Examiner rejected claim 1 under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Amended claim 1 is specifically modified to cover monomers with two and only two dienophile groups attached to a single aromatic ring. The claim does recite the key aspects: it defines the B-functional group and defines the A-functional group. It also says that the A group must be bonded to a B-group. Additionally, the claim of dienophile groups is supported by their distinct role within the overall claimed structure to the purpose of the present invention, which includes making insulating films in semiconductor devices. Claim 1 clearly defines the boundaries of the invention. That it may encompass many species is irrelevant to meeting the definiteness requirements of 35 U.S.C. section 112. Therefore, amended claim 1 meets the standard of particularity, clarity and distinctiveness espoused under 35 U.S.C. 112.

The 102(b) Rejections

The Examiner rejected claims 1, 6 and 7 under 35 U.S.C. 102(b) as being anticipated by Tobe et al (J. Org. Chem. 1997), hereinafter the Tobe reference, and as being anticipated by Tovar et al (J. Org. Chem. 1997), hereinafter the Tovar reference.

Amended claims 1 and 6 and the dependent claim 7 each cover a monomer with two and only two dienophile groups attached to a single aromatic ring. The Tobe reference

describes compounds (compounds 8a-d') that comprise of a single aromatic ring attached to four dienophile groups. The monomer claimed in amended claims 1 and 6 can have no more than two dienophile groups; however, compounds 8a-d' have a total of seven dienophile groups. Nothing in the Tobe reference teaches the use of a monomer with exactly two dienophile groups attached to a single aromatic ring for making low dielectric constant insulating layers in microelectronic devices. Therefore amended Claim 1, including all of the claims depending from amended Claim 1, are not anticipated by the Tobe reference.

Similarly and with respect to amended claims 1 and 6 and the dependent claim 7, the claims are not anticipated by the Tovar reference. The Tovar reference teaches the use of an inverse-demand Diels-Alder reactivity of cyclopentadienones to prepare 1,2,3,4/5,6-differentially protected hexaalkynylbenzenes (HEBs). Whereas amended claim 1 comprises exactly two dienophile groups attached to a single aromatic ring, compounds 7a and 7b comprise of a single aromatic ring attached to four dienophile groups.

The Examiner also rejected claims 1, 2 and 7 under 35 U.S.C. 102(b) as being anticipated by Godschalx et al (US 5,965,679), hereinafter the Godschalx reference.

The Godschalx reference describes oligomers or uncured polymers which may be cured to form cured polymers which in turn serve as dielectrics in the microelectronics industry. Compounds A, E and F described in the Godschalx reference show structures with one or two ethynyl groups and 1 cyclopentadiene group. But with respect to this reference, there is either only one ethynyl group (applicant's amended claim 1 requires at least two ethynyl groups) or the ethynyl groups are on separate aryl groups and are not both attached to the same aryl group as described in applicant's amended claim 1 ("two dienophile groups...attached to a single aromatic ring") and amended claim 2 where the structure shows two ethynyl groups attached to a single aromatic ring. Therefore amended claims 1, 2 and 7 are not anticipated by compounds A, E and F in the Godschalx.

CONCLUSION

Applicants believe the present application now stands in condition for allowance based on the amendments and remarks presented above. Early notification thereof is respectfully requested.

Respectfully submitted,


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